

### ABSTRACT OF THE DISCLOSURE

In an image encoder is provided, including a to-be-encoded object prediction unit which counts quantization coefficients which are newly made significant, for example, when each bit plane is encoded, on the basis of quantization coefficient for each bit plane in all code blocks to provide a feature amount, estimates the number of generated codes on the basis of the feature amount, and adds the estimated number of codes in a predetermined order. When an initial target number of codes is reached, the to-be-encoded object prediction unit stops the addition, and supplies the entropy encoder with information on the bit planes having the quantization coefficients thereof been added as to-be-encoded object information. In this entropy encoder, only the quantization coefficient in the bit planes represented by the to-be-encoded object information, is processed by three types of encoding passes while truncating the quantization coefficients of the other bit planes.